



Top 5 Weather Events of 2010 for Northern Arizona

Presented by
National Weather Service
Flagstaff, AZ





In 2010, Northern Arizona experienced a year of weather extremes. Weather ranged from brutal winter storms, to relentless dust storms, fires, floods and even a rare tornado outbreak.

The following is a description of the Top 5 weather events of the year, listed in chronological order. These events each had significant impacts on our residents and visitors.





Winter Storm Jan. 18-23

Extreme snowfall, heavy rain, and strong winds combined to create severe and damaging winter hazards over much of northern Arizona during the week of January 18-23, 2010. Closed roads, collapsed roofs and extended power outages were observed. The extreme snowfall was primarily confined to elevations above 6000 feet, with flooding below 5500 feet south and west of the Mogollon Rim (Yavapai and Gila Counties).

THE STORM TOTAL SNOWFALL FOR FLAGSTAFF OF 54.2 INCHES RANKS AS THE 2nd HIGHEST STORM SNOWFALL IN FLAGSTAFF HISTORY.

THE STORM TOTAL PRECIPITATION FOR FLAGSTAFF OF 5.27 INCHES RANKS AS THE 6th HIGHEST IN FLAGSTAFF HISTORY.

THE STORM TOTAL PRECIPITATION FOR PRESCOTT OF 5.54 INCHES RANKS AS THE 3rd HIGHEST IN PRESCOTT HISTORY. PRESCOTT ALSO RECEIVED ITS 3rd HIGHEST SNOWFALL TOTAL.



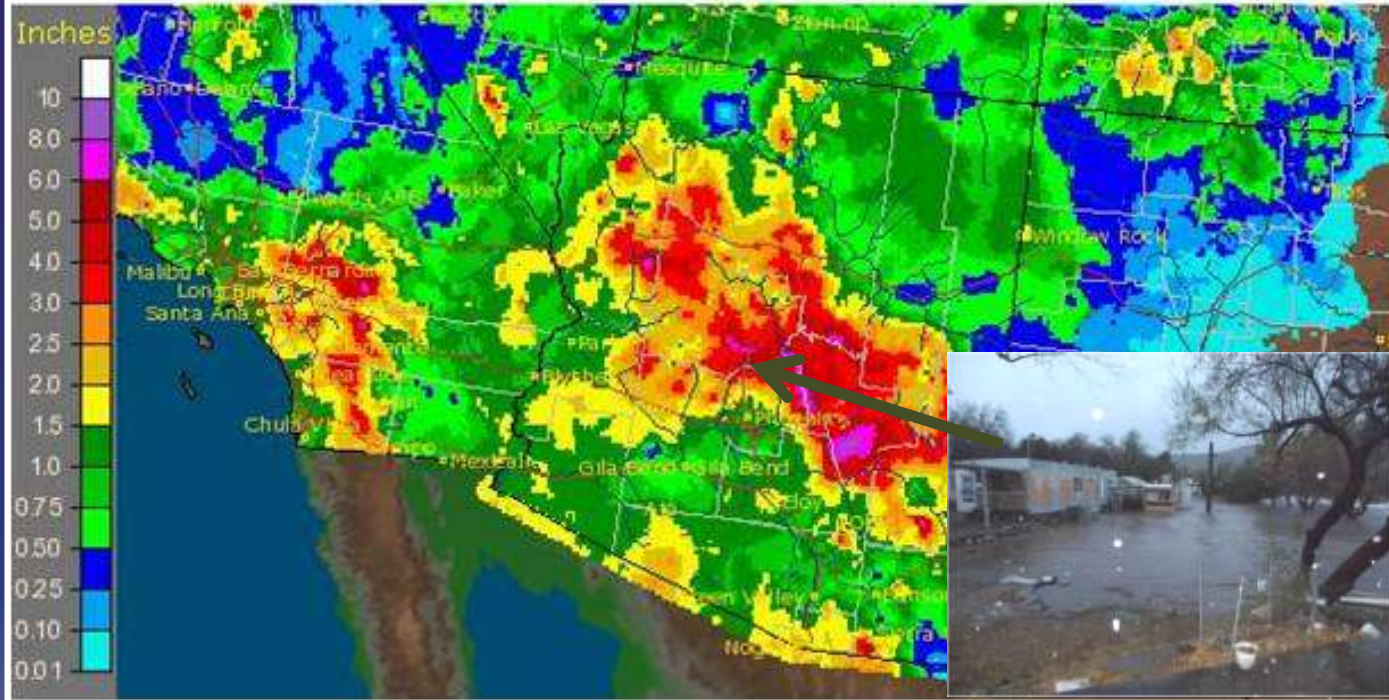
Storm Total Snowfall (inches)

A fabric and bookstore in Flagstaff
collapsed from the weight of the snow.



SUNRISE MOUNTAIN	96
FOREST LAKES	72
ARIZONA SNOWBOWL	67 TO 92
GREER	60
CLINTS WELL	60
KACHINA VILLAGE	50 TO 65
GRAND CANYON N RIM	57
NORTH FLAGSTAFF	55.6
GRAND CANYON S RIM	51 TO 55
FLAGSTAFF AIRPORT	54.2
BELLEMONT	52.7
PINETOP	51 TO 59
MUNDS PARK	50.0
HEBER	47
ALPINE	44 TO 46
M McNARY 2 MI N	43
TONTO VILLAGE	41
WILLIAMS	39 TO 43
SHOW LOW	32 TO 36
VALLE	18
WINDOW ROCK	16 TO 19
PRESCOTT	13 TO 18
KEAMS CANYON	12
ASH FORK	11 TO 12
PAYSON	11.5
WUPATKI NM	10.7
CONCHO	7.5 TO 8.5
PETRIFIED FOREST	5 TO 6
CANYON DE CHELLY	4 TO 5

Arizona: 1/22/2010 1-Day Observed Precipitation
Valid at 1/22/2010 1200 UTC- Created 1/24/10 11:33 UTC



Precipitation estimates for the 24 hour period ending 5AM MST Friday, January 22, 2010. This period encompassed the brunt of the storm.

Heavy rain at the lower elevations impacted the Tonto Creek and Agua Fria basins (4-10 inch 24-hour rainfall), and consequently resulted in rapid and significant rises in these waterways. The Agua Fria River at Black Canyon City and Rock Springs crested at 28 feet, resulting in the lands adjacent to the river become inundated with water, including several neighborhoods and mobile home parks (pictured above).



Spring Wind and Dust Storms

Six separate storm systems during April and May caused high winds across northern and central Arizona. Severe blowing dust affected many areas in Northeastern Arizona including the majority of the Navajo and Hopi tribal lands.

LOW VISIBILITY CAUSED BY THE DUST CAUSED LENGTHY CLOSURES ALONG PORTIONS OF INTERSTATE 40 BETWEEN WINSLOW AND FLAGSTAFF DURING PERIODS OF THE HIGHEST WINDS. FOR EXAMPLE, I-40 WAS CLOSED FROM 11 AM MAY 28 UNTIL 630 AM MAY 29 RESULTING IN MAJOR TRAVEL DELAYS.

...SELECTED WIND GUST REPORTS FROM THESE SIX STORMS...

	Apr 12	Apr 21	Apr 28	May 11	May 23	May 28
Two Guns	54 mph	60 mph	73 mph	77 mph	60 mph	47 mph
Winslow	55 mph	60 mph	69 mph	58 mph	60 mph	44 mph
Flagstaff	51 mph	47 mph	55 mph	59 mph	51 mph	49 mph
Show Low	52 mph	49 mph	53 mph	60 mph	56 mph	40 mph
St Johns	43 mph	53 mph	51 mph	55 mph	47 mph	43 mph
Grand Canyon	49 mph	40 mph	55 mph	43 mph	56 mph	49 mph



Schultz Fire and Resulting Floods

On June 20, 2010, a fire started on the San Francisco Peaks north of Flagstaff due to an abandoned campfire. By the time the fire was contained around 10 days later, it had burned over 15,000 acres on the north side of the peaks, much of it pristine forest.

Although the winter of 2009-2010 produced above normal precipitation, a sudden dry spell from mid-April through June (3rd driest 100-day stretch of all time at Flagstaff) led to conditions favorable for fire in the area. Even before the fire was contained, it became apparent that the next threat would be from summer rains and resulting flash floods downstream over neighborhoods northeast of Flagstaff.



On July 20th, thunderstorms with heavy rainfall developed over the area burned by the Schultz fire. The majority of the burn area received over 1.75 inches of rain in less than one hour. This triggered heavy storm runoff, and resulted in flooding in Timberline, Hutchinson Acres, Wupatki Trails and Doney Park.



- At least 85 homes were flooded to some degree.
- The flood also affected U.S. Highway 89 and it had to be closed temporarily.
- The area would experience several more episodes of flooding during the summer.

October 6th Tornado Outbreak

A strong pacific low pressure system located across southern California, combined with substantial moisture moving north from Mexico, led to the development of widespread severe thunderstorm and tornado activity across the region on Wednesday, October 6, 2010. This event was unusual for Arizona due to the large number of tornadic supercell thunderstorms.

Tornado damage at Bellemont Arizona





Confirmed Tornadoes on October 6, 2010

Tornado #1: Blue Ridge: Est. 1:58 – 2:12 AM. EF-1 (14 mile length)

Tornado #2: Bellemont: Est. 4:53 – 5:44 AM. EF-2 (34 mile length)

Tornado #3: Bellemont: Est. 5:54 – 6:50 AM. EF-2+ (35 mile length)

Tornado #4: 2 mi W Bellemont: Est. 6:50 – 7:14 AM. EF-2 (18.6 mile length)

Tornado #5: 15 mi SSW Flagstaff: Est. 9:10 – 9:17 AM. EF-2 (2.4 mile length)

Tornado #6: 11 mi SE Cordes Junction: Est. 10:30 AM. EF-0

Tornado #7: 2 mi S. Munds Park: 12:05 PM MST. EF-0 Path unknown.

Tornado #8: 4 mi S. Flagstaff: 12:20 PM MST. EF-0 Path unknown.

Tornado #9: 19 mi SE Tuba City: Est 12:10 PM MST. EF-3 Path unknown.



December Winter Storm

A strong and very cold winter storm affected northern Arizona from Wednesday Dec 29th through Friday Dec 31st. Heavy snow fell above 4000 feet elevation, with light accumulations reported at unusually low elevations. The storm created major travel problems, shutting down several major roads including Interstates 17 and 40 for an extended period. Extreme cold followed the storm, with daytime temperatures New Year's Eve in the mid teens in the mountains. Temperatures would plummet well below zero for many locations later that night.

Storm Total Snowfall Dec 29-30

Forest Lakes	30 inches
Munds Park	19.5 inches
Bellemont	18.8 inches
Flagstaff	17.2 inches
Crown King	17 inches
Pine	16 inches
Grand Canyon	16 inches
Heber	12 inches
1 W Prescott	9.5 inches
Payson	7.3 inches
Snowflake	7 inches
Ash Fork	5.5 inches
Window Rock	5 inches
Bagdad	4.5 inches
Dewey-Humboldt	2.5 inches